

## **ABSTRACT OF THE DISCLOSURE**

Reticle inspection systems are provided. One embodiment includes an optical subsystem configured to produce an aerial image of a reticle by simulating dose as a  
5 function of position that would be projected into a resist by an exposure system such that the aerial image is substantially equivalent to an image of the reticle that would be projected into the resist by the exposure system. Another embodiment includes an optical subsystem configured to alter one or more properties of light such as polarization transmitted by a reticle and to project the light onto a detector. An additional  
10 embodiment includes an optical subsystem configured to form an intermediate aerial image of a reticle at a numerical aperture approximately equal to a numerical aperture at which an exposure system projects an image of the reticle into a resist and to project the intermediate aerial image onto a detector.

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